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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,408	01/16/2004	Matthew E. Blaich	HES 2000-IP-002053U1	7483
28857	7590	08/31/2006	EXAMINER COY, NICOLE A	
CRAIG W. RODDY HALLIBURTON ENERGY SERVICES P.O. BOX 1431 DUNCAN, OK 73536-0440			ART UNIT 3672	

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/759,408	Applicant(s) BLAUCH ET AL.	
	Examiner Nicole Coy	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 33-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 33-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the specification for the limitation wherein the additive hydrolyses in less than about 1 hour.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7-9, 12-15, 33, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/02698.

With respect to claim 1, WO 01/02698 discloses a method of servicing a wellbore in a subterranean formation, comprising: (a) providing a wellbore servicing fluid

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comprising an additive for removing a filter cake from a face of the subterranean formation wherein the additive for removing the filter cake is dissolved in an oil phase (see page 11 lines 25-28, wherein the ester can be injected into a hydrocarbon) of the wellbore servicing fluid (see page 3 lines 9-14 and page 4 lines 20 and 21, wherein a mutual solvent is inherently oil-soluble); and (b) contacting the filter cake with the additive to thereby remove the filter cake (see page 3 lines 9-14 and page 1 line 21) wherein the additive hydrolysis in situ when the additive contacts the filter cake (see page 11 lines 6-12, wherein WO 01/02698 discloses the hydrolysis is taking place downhole and page 12 lines 1-7, wherein WO 01/02698 discloses that the treatment fluid can be prepared on the fly).

With respect to claim 2, WO 01/02698 discloses the removal of the filter cake and the servicing of the wellbore in situ (see page 4 line 4).

With respect to claim 3, WO 01/02698 discloses a wellbore which extends in the horizontal direction (see page 13 line 23).

With respect to claim 4, WO 01/02698 discloses a wellbore servicing fluid comprising gravel suspended therein, wherein the gravel is deposited in the wellbore concurrent with the removal of the filter cake (See page 14 lines 20-21).

With respect to claim 5, WO 01/02698 discloses that the wellbore servicing fluid is selected from the group consisting of an oil-based fluid, an invert emulsion fluid, and a reversible emulsion fluid (see page 11 lines 25-28).

With respect to claim 7, WO 01/02698 discloses an additive that is an oil-soluble compound that undergoes hydrolysis in the wellbore to produce an acid. See page 3 lines 9-14 and page 4 lines 20 and 21, wherein a mutual solvent is inherently oil-soluble.

With respect to claim 8, WO 01/02698 teaches an acid which dissolves particulates in the filter cake (see page 16 lines 29-30; page 3 lines 20-21).

With respect to claim 9, WO 01/02698 teaches that particulates comprise calcium carbonate (see page 16 lines 29-30).

With respect to claim 12, WO 01/02698 teaches an additive which undergoes hydrolysis when it contacts water provided from water in the wellbore servicing fluid, connate water in the subterranean formation, water in the filter cake, water produced by the subterranean formation, water pumped into the wellbore, or combinations thereof (see page 3 lines 9-14).

With respect to claim 13, WO 01/02698 teaches an additive which comprises organic anhydrides, glycols, esters, or combinations thereof (see page 3 line 23).

With respect to claim 14, WO 01/02698 teaches a wellbore servicing fluid further comprising a polymer breaker (see page 14 lines 15-16).

With respect to claim 15, WO 01/02698 teaches an amount of additive present in the wellbore servicing fluid ranging from 0.1 % to about 26% by total weight of the fluid (see page 4 line 26).

With respect to claim 33, WO 01/02698 discloses that the hydrolysis occurs substantially in the absence of a catalyst (see page 6 lines 19-24, wherein it may be

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desirable to have a slow hydrolysis, such as filter cake removal from a well which has been drilled but which is shut in for an extended time before being put in production.

With respect to claim 36, WO 01/02698 discloses that the hydrolysis is delayed until the additive contacts free water (see page 15 line 15, wherein the catalyst and ester can be in the form of a delayed release preparation).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10, 11, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/02698 in view of Patel (USP 5,888,944).

With respect to claim 10, WO 01/02698 teaches that filter cakes are formed. See page 1 line 21. However, WO 01/02698 is silent as to the particular method by which the filter cake is formed. However, forming filter cakes from a reversible water-in-oil emulsion is well known in the prior art. For example, Patel teaches a method of removing a filter cake from a wellbore which includes drilling the wellbore with a novel invert emulsion drilling mud in which the emulsion can be converted from a water-in-oil type emulsion to an oil-in-water type emulsion. See column 2 lines 60-64. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify WO 01/02698 by forming the filter cake from a reversible water-in-

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oil emulsion as taught by Patel, as this type of emulsion is commonly used to form filter cakes.

WO 01/02698 teaches that in some circumstances the use of an emulsion of an ester may be desirable. See page 11 lines 31-32. However, WO 01/02698 is silent as to what those types of emulsion are. However, Patel teaches a method of removing a filter cake from a wellbore which includes drilling the wellbore with a novel invert emulsion drilling mud in which the emulsion can be converted from a water-in-oil type emulsion to an oil-in-water type emulsion. See column 2 lines 60-64. Patel also teaches that the acid utilized to break the invert emulsions of the present invention include hydrolysable esters. See column 5 lines 48-66. Patel teaches that the emulsion is converted in order to decrease the number of steps involved in removing the filter cake and cleaning up the well while minimizing the risk of well collapse. See column 2 lines 44-49. It would have been obvious to modify WO 01/02698 by converting the reversible water-in-oil emulsion of the filter cake to an oil-in-water emulsion as taught by Patel in order to decrease the number of steps involved in removing the filter cake and cleaning up the well while minimizing the risk of well collapse.

With respect to claim 34, WO 01/02698 does not disclose that the additive is acetic anhydride. Patel discloses that acetic anhydride and hydrolyzable esters can be used to break invert emulsions in a filter cake. It would have been obvious to one having ordinary skill in the art at the time of the invention to replace the ester in WO 01/02698 with acetic anhydride as taught by Patel as either additive would work to remove the filter cake.

7. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/02698 in view of Parlar et al. (USP 6,631,764).

With respect to claim 16, while WO 01/02698 discloses that gravel can be added to the servicing fluid, WO 01/02698 is silent as to the amount of gravel that can be added. Parlar et al. discloses gravel present in the wellbore servicing fluid which ranges from about 0.1 to about 15 pounds of gravel/gallon of the fluid (see column 5 lines 15-18) in order to allow the fluid to control the well during well completion operations. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify WO 01/02698 by including gravel present in the ranges of about 0.1 to about 15 pounds gravel/gallon as taught by Parlar et al. in order to allow the fluid to control the well during completion operations.

With respect to claim 17, WO 01/02698 does not disclose that the wellbore servicing fluid comprises from about 30% to about 50% oil and from about 50% to about 70% water when the fluid is an invert emulsion fluid or a reversible emulsion fluid, all weight percentages being by total weight of the wellbore servicing fluid. Parlar et al. teaches a wellbore servicing fluid comprises from about 30% to about 50% oil and from about 50% to about 70% water when the fluid is an invert emulsion fluid or a reversible emulsion fluid, all weight percentages being by total weight of the wellbore servicing fluid (see column 8 table 1) in order to invert the water in oil emulsion in the filter cake when the fluid comes into contact with the filter cake, and thus deposit gravel and remove the filter cake. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify WO 01/02698 by using a servicing fluid having

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about 30-50% oil and 50-70% water in order to invert the water in oil emulsion in the filter cake when the fluid comes into contact with the filter cake, and thus deposit gravel and remove the filter cake.

Response to Arguments

8. Applicant's arguments filed 6/28/06 have been fully considered but they are not persuasive, with respect to the Harris reference. Applicant argues that Harris' additive is hydrolyzed at the surface, and then injected into the subterranean formation. However, WO 01/02698 teaches that the hydrolysis takes place downhole. See page 11 lines 6-12. Furthermore, WO 01/02698 teaches that the treatment fluid can be prepared on the fly, implying that it is not prepared on the surface, and hence hydrolysis would not take place on the surface. See page 12 lines 1-7.

The amendment filed 6/28/06 is sufficient to overcome the rejections over Hodge and Parlar.

In view of the new rejections of claims 5, 16 and 17 over WO 01/02698, this rejection is made non-final.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole Coy whose telephone number is 571-272-5405. The examiner can normally be reached on M-F 7:30-5:00, 1st F off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nac



William Neuber
Primary Examiner